



STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 131874

TO: Shailendra Kumar

Location: 5c03 / 5c18

Thursday, September 09, 2004

Art Unit: 1621

Phone: 272-0640

Serial Number: 10 / 627555

From: Jan Delaval

Location: Biotech-Chem Library

Rem 1A51

Phone: 272-2504

jan.delaval@uspto.gov

Search Notes

Requester's Full Name: S. Kumar Examiner #: 695-94 Date: 9/10/04
 Art Unit: 1621 Phone Number: 2-0640 Serial Number: 10/627,555
 Mail Box and Bldg/Room Location: AEM 5C03 Results Format Preferred (circle): PAPER DISK E-MAIL
5C18

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Crystalline beta 2 adrenergic receptor agonist

Inventors (please provide full names): Martin S. Linse et al.

Earliest Priority Filing Date: 7/26/02

Attorney Docket No.: P-154-US1

*Open
9/9/04*

WHAT IS CLAIMED IS:

1. Crystalline *N*-{2-[4-((*R*)-2-hydroxy-2-phenylethylamino)phenyl]ethyl}-(*R*)-2-hydroxy-2-(3-formamido-4-hydroxyphenyl)ethylamine dihydrochloride.

5

2. The compound of Claim 1 which is characterized by an x-ray powder diffraction pattern having two or more diffraction peaks at 2θ values selected from the group consisting of 15.61±0.2, 16.32±0.2, 19.50±0.2, 24.25±0.2, 24.92±0.2, 25.45±0.2, 28.67±0.2, and 31.16±0.2.

10

3. The compound of Claim 1 wherein the x-ray powder diffraction pattern comprises diffraction peaks at 2θ values of 24.25±0.2, 24.92±0.2, and 25.45±0.2.

15

4. The compound of Claim 1 which is characterized by an x-ray powder diffraction pattern in which the peak positions are substantially in accordance with the peak positions of the pattern shown in FIG. 1.

20

5. The compound of Claim 1 having an infrared absorption spectrum with significant absorption bands at 696±1, 752±1, 787±1, 827±1, 873±1, 970±1, 986±1, 1020±1, 1055±1, 1066±1, 1101±1, 1197±1, 1293±1, 1371±1, 1440±1, 1542±1, 1597±1, 1658±1, 2952±1, 3372±1, and 3555±1 cm⁻¹.

25

6. The compound of Claim 1 which is characterized by a differential scanning calorimetry trace which shows an onset of endothermic heat flow at about 200°C.

7. A hydrochloride salt of *N*-{2-[4-((*R*)-2-hydroxy-2-phenylethylamino)phenyl]ethyl}-(*R*)-2-hydroxy-2-(3-formamido-4-hydroxyphenyl)ethylamine having an x-ray powder diffraction pattern having two or more diffraction peaks at 2θ values selected from the group consisting of 15.61±0.2, 16.32±0.2, 19.50±0.2, 24.25±0.2, 24.92±0.2, 25.45±0.2, 28.67±0.2, and 31.16±0.2.

30

=> fil reg
FILE 'REGISTRY' ENTERED AT 15:28:46 ON 09 SEP 2004
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 8 SEP 2004 HIGHEST RN 741635-85-8
DICTIONARY FILE UPDATES: 8 SEP 2004 HIGHEST RN 741635-85-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

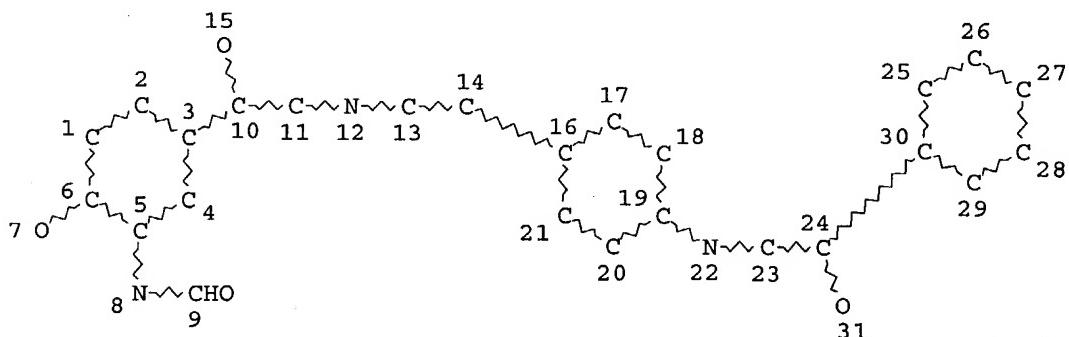
Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sta que 121
L19 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 31

STEREO ATTRIBUTES: NONE

L21 3 SEA FILE=REGISTRY FAM FUL L19

100.0% PROCESSED 9 ITERATIONS
SEARCH TIME: 00.00.01

3 ANSWERS

=> d his

(FILE 'HOME' ENTERED AT 15:19:30 ON 09 SEP 2004)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 15:19:39 ON 09 SEP 2004
L1 1 S (WO2003-US23214 OR US2002-398678# OR US2002-398928#) /AP,RPN

L2 E LINSELL M/AU
 18 S E4-E6
 E JACOBSEN J/AU
 L3 106 S E3,E16
 E JACOBSEN JOHN/AU
 L4 31 S E3,E9,E10
 E KHOSSRAVI D/AU
 L5 10 S E4
 E PABORJI M/AU
 L6 9 S E4
 E ZHANG W/AU
 L7 863 S E3,E12
 E ZHANG WEI/AU
 L8 2104 S E3
 L9 7 S E35
 E ZHANG WEIJ/AU
 L10 58 S E10,E11
 E THERAVANCE/PA,CS
 L11 31 S E3-E12
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 15:22:38 ON 09 SEP 2004

L12 19 S E1-E19
 L13 2 S L12 AND C25H29N3O4
 L14 1 S 652990-07-3/CRN
 E C25H29N3O4/MF
 L15 255 S E3 AND 46.150.18/RID AND 3/NR
 L16 4 S L15 AND FORMAMIDE
 L17 2 S L16 NOT ETHOXY
 L18 0 S 344466-42-8/CRN
 L19 STR
 L20 0 S L19 FAM SAM
 L21 3 S L19 FAM FUL
 SAV L21 KUMAR627/A
 L22 3 S L13,L14,L17,L21

FILE 'HCAOLD' ENTERED AT 15:28:01 ON 09 SEP 2004

L23 0 S L22

FILE 'HCAPLUS' ENTERED AT 15:28:04 ON 09 SEP 2004

L24 2 S L22
 L25 1 S L24 AND L1-L11
 L26 2 S L24,L25

FILE 'USPATFULL, USPAT2' ENTERED AT 15:28:33 ON 09 SEP 2004

L27 0 S L22

FILE 'REGISTRY' ENTERED AT 15:28:46 ON 09 SEP 2004

=> fil hcaplus
 FILE 'HCAPLUS' ENTERED AT 15:28:54 ON 09 SEP 2004
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FILE COVERS 1907 - 9 Sep 2004 VOL 141 ISS 11
FILE LAST UPDATED: 8 Sep 2004 (20040908/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 126 all hitstr tot

L26 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2004:101120 HCAPLUS
DN 140:151985
ED Entered STN: 08 Feb 2004
TI Preparation and formulation of a crystalline β_2 adrenergic receptor agonist, hydroxy(formamidoxyphenyl)ethylamine
IN Linsell, Martin S.; Jacobsen, John R.; Khosravi, Davar; Paborji, Mehdi; Zhang, Weijiang
PA Theravance, Inc., USA
SO PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07C233-43
ICS A61K031-165; A61P011-00; C07C209-16
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004011416	A1	20040205	WO 2003-US23214	20030725 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
PRAI	US 2002-398678P	P	20020726		
	US 2002-398928P	P	20020726		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004011416	ICM	C07C233-43
	ICS	A61K031-165; A61P011-00; C07C209-16

AB The invention provides formulations for the administration of a crystalline salt form of a novel β_2 adrenergic receptor agonist. Methods of using the crystalline salt form to treat diseases associated with β_2 adrenergic receptor activity, and processes useful for preparing such a crystalline compound are disclosed. Thus, an q. aerosol formulation contained a hydroxy(formamidoxyphenyl)ethylamine derivative 0.1755, citric acid 2.10, Tween-80 0.05, 1N NaOH qs to pH 5.0, and 0.9% NaCl solution qs to 1 g.

ST beta2 adrenergic receptor agonist crystal prepn; hydroxyformamidoxyphenylethylamine deriv adrenergic receptor agonist prepn

IT Drug delivery systems

(aerosols; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Polar solvents
(aprotic; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Drug delivery systems
(capsules; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Lung, disease
(chronic obstructive; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Drug delivery systems
(inhalants; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Medical goods
(inhalers; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Drug delivery systems
(injections; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Crystal structure
(of hydroxy(formamidohydroxyphenyl)ethylamine derivative)

IT Drug delivery systems
(oral; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Drug delivery systems
(powders, inhalants, dry; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Parturition
(premature; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Asthma

Buffers

Cholinergic antagonists

Heart, disease

Inflammation

Lung, disease

Nervous system, disease

Particle size distribution

Polar solvents

Powder x-ray diffractometry

Stability

Surfactants
(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Corticosteroids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Drug delivery systems
(tablets; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Drug delivery systems
(topical; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT Adrenoceptor agonists
(β_2 -; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 9036-21-9, PDE4
RL: BSU (Biological study, unclassified); BIOL (Biological study)

(inhibitors; preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 67-63-0, Isopropanol, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 652990-07-3P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 652990-12-0P

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 18162-48-6, tert.-Butyldimethylsilyl chloride 201677-59-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 321709-19-7P 652990-08-4P 652990-09-5P 652990-10-8P 652990-11-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

IT 77-92-9, Citric acid, biological studies 112-80-1, Oleic acid, biological studies 7647-14-5, Sodium chloride, biological studies

9005-65-6, Tween 80 9005-67-8, Tween 60 26266-58-0, Sorbitan trioleate

192056-77-2 397864-44-7

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Advanced Medicine Inc; WO 0142193 A 2001 HCPLUS

(2) Malamas, M; MEDICINAL CHEMISTRY RESEARCH 2000, V10(3), P164 HCPLUS

IT 652990-07-3P

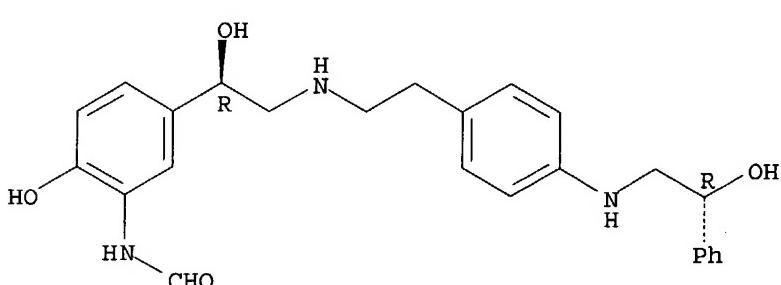
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(preparation and formulations of crystalline β_2 adrenergic receptor agonist)

RN 652990-07-3 HCPLUS

CN Formamide, N-[2-hydroxy-5-[(1R)-1-hydroxy-2-[[2-[4-[(2R)-2-hydroxy-2-phenylethyl]aminophenyl]ethyl]amino]ethyl]phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



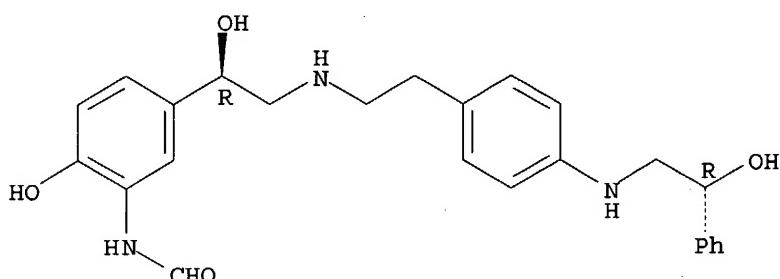
IT 652990-12-0P

RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use);
 BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation and formulations of crystalline β_2 adrenergic receptor
 agonist)

RN 652990-12-0 HCPLUS

CN Formamide, N-[2-hydroxy-5-[(1R)-1-hydroxy-2-[[2-[4-[(2R)-2-hydroxy-2-phenylethyl]amino]phenyl]ethyl]amino]ethylphenyl]-, dihydrochloride (9CI)
 (CA INDEX NAME)

Absolute stereochemistry.



● 2 HCl

L26 ANSWER 2 OF 2 HCPLUS COPYRIGHT 2004 ACS on STN

AN 2001:435027 HCPLUS

DN 135:45979

ED Entered STN: 15 Jun 2001

TI Preparation of 4-(arylhdroxyethylaminoethyl)phenylaminohydroxyethylbenzenes and related compounds as β_2 adrenergic receptor agonists and partial agonists.

IN Moran, Edmund J.; Griffin, John H.; Choi, Seok-ki

PA Advanced Medicine, Inc., USA

SO PCT Int. Appl., 164 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07C233-43

ICS C07C215-68; A61K031-135; A61K031-165; A61P011-00; A61P025-00

CC 25-7 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
 Section cross-reference(s): 1, 27

FAN.CNT 31

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001042193	A1	20010614	WO 2000-US33057	20001206
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US	6576793	B1	20030610	US 2000-637899	20000814
ZA	2000005850	A	20020517	ZA 2000-5850	20001019
BR	2000015962	A	20020730	BR 2000-15962	20001206
EP	1235787	A1	20020904	EP 2000-986271	20001206
EP	1235787	B1	20031029		

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, SI, LT, LV, FI, RO, MK, CY, AL

JP 2003516381	T2	20030513	JP 2001-543495	20001206
AT 253039	E	20031115	AT 2000-986271	20001206
PT 1235787	T	20040331	PT 2000-986271	20001206
US 2003087307	A1	20030508	US 2002-108945	20020328
ZA 2002003450	A	20030513	ZA 2002-3450	20020430
NO 2002002655	A	20020605	NO 2002-2655	20020605
HK 1048803	A1	20040130	HK 2003-101047	20030213
PRAI US 1999-457618	A	19991208		
US 2000-637899	A1	20000814		
US 1999-323943	A2	19990602		
WO 2000-US33057	W	20001206		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
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WO 2001042193	ICM	C07C233-43
	ICS	C07C215-68; A61K031-135; A61K031-165; A61P011-00; A61P025-00

US 2003087307	ECLA	A61K031/137; A61K031/167; C07C215/60; C07C215/68; C07C233/43
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AB LpXq [p= 2-10; q = 1-20; X = linker, L = ligand; 1 ligand = Ar1CH(OH)CHR1NR2WAr2, the other = QAr3; Ar1, Ar2 = aryl, heteroaryl, heterocyclyl, (substituted) cycloalkyl; R1 = H, (substituted) alkyl, bond to linker; R2 = H, aralkyl, acyl, (substituted) alkyl, cycloalkyl, bond to linker; W = bond, (substituted) (heteroatom-interrupted) alkylene; Ar3 = aryl, heteroaryl, (substituted) cycloalkyl, heterocyclyl; Q = bond, (substituted) (heteroatom-interrupted) alkylene; with provisos], were prepared for treatment of respiratory diseases (no data). Thus, α,α -hydroxy-4-hydroxy-3-methoxycarbonylacetophenone (preparation given) was stirred with trans-1,4-diaminocyclohexane in THF for 3 h at room temperature followed by addition of BH3/Me2S in hexane and stirring for 4

h to

give trans-1,4-bis[N-[2-(4-hydroxy-3-hydroxymethylphenyl)-2-hydroxyethyl]amino]cyclohexane.

ST arylhydroxyethylaminoethylphenylaminohydroxyethylbenzene prepn adrenergic agonist; chronic obstructive pulmonary disease treatment
 arylhydroxyethylaminoethylphenylaminohydroxyethylbenzene prepn;
 antiasthmatic arylhydroxyethylaminoethylphenylaminohydroxyethylbenzene prepn

IT Lung, disease

(chronic obstructive, treatment; preparation of
 arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related
 compds. as β_2 adrenergic receptor agonists and partial agonists)

IT Antiasthmatics

(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β_2 adrenergic receptor agonists and partial agonists)

IT Adrenoceptor agonists

(β_2 -; preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β_2 adrenergic receptor agonists and partial agonists)

IT 321708-20-7P 321708-23-0P 321708-25-2P 321708-27-4P 321708-29-6P

321708-31-0P 321708-33-2P 321708-35-4P 321708-37-6P 321708-39-8P

321708-41-2P 321708-43-4P 321708-45-6P 321708-47-8P 321708-49-0P

321708-51-4P 321708-53-6P 321708-56-9P 321708-57-0P 321708-60-5P

321709-02-8P 344466-40-6P 344466-41-7P 344466-42-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β_2 adrenergic receptor agonists and partial agonists)

IT 70-11-1, α -Bromoacetophenone 80-52-4 100-52-7, Benzaldehyde, reactions 101-80-4 101-90-6, Resorcinol diglycidyl ether 107-22-2, Glyoxal 539-48-0, p-Xylenediamine 629-09-4, 1,6-Diodohexane 1074-12-0, Phenylglyoxal 1075-06-5, α,α -Dihydroxyacetophenone 1477-55-0, 1,3-Benzenedimethanamine 1572-55-0, 4-Aminomethyl-1,8-octanediamine 1761-71-3 2461-42-9 2579-20-6, 1,3-Cyclohexanedimethanamine 2615-25-0, trans-1,4-Diaminocyclohexane 4403-69-4, 2-Aminobenzylamine 4403-71-8, 4-Aminobenzylamine 6621-59-6, 6-Bromohexanenitrile 7209-38-3, 1,4-Piperazinedipropanamine 10210-17-0, 3-(4-Hydroxyphenyl)-1-propanol 13472-00-9, 2-(4-Aminophenyl)ethylamine 16475-90-4, Methyl 5-acetylsalicylate 20780-53-4 37148-47-3 43229-01-2 94749-70-9

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β_2 adrenergic receptor agonists and partial agonists)

IT 27475-09-8P 27475-14-5P 29754-58-3P 92900-77-1P 94838-59-2P
321708-64-9P 321708-67-2P 321708-69-4P 321708-72-9P 321708-74-1P
321708-76-3P 321708-78-5P 321708-82-1P 321708-84-3P 321708-86-5P
321708-89-8P 321708-90-1P 321708-92-3P 321708-94-5P 321708-98-9P
321709-00-6P 344466-43-9P 344466-44-0P 344466-45-1P 344466-46-2P
344466-47-3P 344466-48-4P 344466-49-5P 344466-50-8P 344466-51-9P
344466-52-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β_2 adrenergic receptor agonists and partial agonists)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

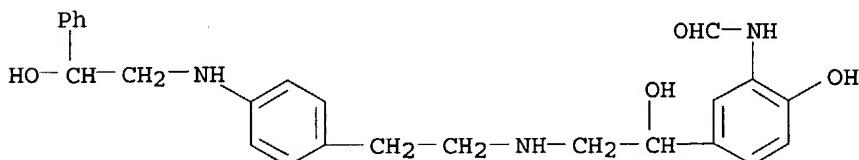
- (1) Advanced Medicine Inc; WO 9964035 A 1999 HCPLUS
- (2) Anon; PATENT ABSTRACTS OF JAPAN 1998, V1998(11)
- (3) Degussa; GB 1040724 A 1966
- (4) Kissei Pharmaceut Co Ltd; JP 10152460 A 1998 HCPLUS
- (5) Sepracor Inc; WO 9821175 A 1998 HCPLUS
- (6) Thomae GmbH Dr K; GB 1394542 A 1975 HCPLUS

IT 344466-42-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of arylhydroxyethylaminoethylphenylaminohydroxyethylbenzenes and related compds. as β_2 adrenergic receptor agonists and partial agonists)

RN 344466-42-8 HCPLUS

CN Formamide, N-[2-hydroxy-5-[1-hydroxy-2-[[2-[4-[(2-hydroxy-2-phenylethyl)amino]phenyl]ethyl]amino]ethyl]phenyl]- (9CI) (CA INDEX NAME)



=>